

REMARKS

This application has been carefully reviewed in light of the Office Action dated May 17, 2007. Claims 1 and 4 to 9 are in the application. Claims 1 and 5 are independent. Reconsideration and further examination are respectfully requested.

Claims 1, and 4 to 9 were rejected under 35 U.S.C. § 103(a) over European Patent Application EP 0752667 (Van Loo) in view of U.S. Patent No. 6,247,101(Settles). Reconsideration and withdrawal of the rejections are respectfully requested.

Referring to the specific language of the claims, independent Claim 1 defines a bus control method for a bus, which is provided with a switch having a plurality of master ports for connecting a plurality of masters and a plurality of slave ports for connecting a plurality of slaves. The switch can establish connection paths between each of the plurality of masters and an arbitrary one of the plurality of slaves for transmitting and receiving a command, an address, and data via the switch. The method comprises a read command transaction step for issuing a first switch request from a first master to the switch for connecting with a first slave, establishing a first connection path between the first master and the first slave through the switch, issuing a first address and a first read command from the first master to the first slave via the first connection path, and releasing the first connection path before read return data corresponding to the first read command is issued from the first slave. The method also comprises a read data transaction step for issuing a second switch request from the first slave to the switch for connecting with the first master if the read return data is ready after the first connection path is released in the read command transaction step, establishing a second connection path between the first slave and the first master via the switch independent from the first connection path

established in the read command transaction step, and issuing the read return data from the first slave to the first master via the second connection path. Before the read data transaction step is completed, a read command transaction step of a next read transaction can be initiated.

Independent Claim 5 defines a bus system comprising a plurality of masters, a plurality of slaves, and a bus that is provided with a switch. The switch can establish connection paths between each of the plurality of masters and an arbitrary one of the plurality of slaves for transmitting and receiving a command, an address, and data via the switch, in a read transaction which includes a read command transaction and a read data transaction. In the read command transaction, a first master issues a first switch request to the switch for connecting with a first slave, the switch establishes a first connection path between the first master and the first slave through the switch, the first master issues a first address and a first read command to the first slave via the first connection path, and the switch releases the first connection path before read return data corresponding to the first read command is issued from the first slave. In the read data transaction, the first slave issues a second switch request for connecting with the first master if the read return data is ready after the first connection path is released in the read command transaction, the switch establish a second connection path between the first slave and the first master through the switch independent from the first connection path established in the read command transaction, and the first slave issues the read return data to the first master via the second connection path. Before the read data transaction is completed, a read command transaction of a next read transaction can be initiated.

The applied references are not seen to disclose or to suggest the features of independent Claims 1 and 5, and in particular, are not seen to disclose or to suggest at least the features of (i) a first master issues a first switch request to a switch for connecting with a first slave, (ii) the switch establishes a first connection path between the first master and the first slave through the switch, and (iii) the first master issues a first address and a first read command to the first slave via the first connection path.

In responding to prior arguments in support of patentability, the Office Action asserts “Applicant’s arguments are centered on the transaction in Van Loo not being sent directly to the switch but to a switch controller.” (Office Action, page 2). This characterization of Applicants’ prior arguments is inaccurate and incomplete.

In the Amendment dated February 23, 2007, Applicants pointed out¹ that: “while Van Loo may disclose (a) a master issuing a [transaction request] to a system controller, and then (b) the system controller issuing the [transaction] request to a slave, Van Loo is not seen to disclose or to suggest (i) a first master initiating a read transaction with a first switch request for connecting with a first slave, (ii) a switch establishing a first connection path between the first master and the first slave, and (iii) the first master issuing a first address and a first read command to the first slave via the first connection path.” (Amendment, pages 8 to 9)(emphasis added).

From the foregoing comparison, it is seen that the operation of Van Loo’s system is different from the claims in many respects. For example, Van Loo may disclose a master issuing a “transaction request”, however Van Loo is not seen to disclose a master

¹/with reference to Van Loo’s disclosure at column 12, lines 11 to 17, column 12, line 26, and Figures 4 to 7 and corresponding text, specifically column 18, lines 34 to 46.

issuing a switch request. In addition, Van Loo is not seen to disclose claimed switch establishing a first connection path between the first master and the first slave, particularly when the claims are viewed as a whole, as they must be interpreted.²

Turning to the presently amended Claims 1 and 5, Van Loo's disclosure of (a) a master issuing a transaction request to a system controller, and then (b) the system controller issuing the transaction request to a slave, is similarly not seen to disclose or to suggest (i) a first master issues a first switch request to a switch for connecting with a first slave, (ii) the switch establishes a first connection path between the first master and the first slave through the switch, and (iii) the first master issues a first address and a first read command to the first slave via the first connection path.

The remaining applied reference, namely Settles, is not seen to cure the deficiencies of Van Loo, either alone or in any permissible combination. Accordingly, independent Claims 1 and 5 are believed to be allowable.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

²In this regard, Applicants submit the Office Action's assertion that Van Loo could be modified, or expressly discloses, "making the switch controller integral with the actual switch paths" is inapposite, since such a modification would not change the above-described operation of Van Loo's system controller.

Turning to a formal matter, the Examiner is respectfully requested to provide an indication that the priority document filed on February 23, 2004 has been received by the Patent Office.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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